

## REMARKS

In accordance with the foregoing, claims 19-38 are pending and under consideration.

### CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 19-38 are rejected under 35 USC §103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2004/0196871 to Terry (hereinafter Terry) in view of U.S. Patent Application Publication No. 2003/0060204 to Franci et al. ("Franci").

Terry does not disclose dividing a frequency band into a plurality of sub-bands as Terry teaches communicating over multiple sub-channels. Several channel or subchannel may be spread over a frequency sub-band. A channel may also be spread over several frequency sub-bands. A sub-channel may be assigned e.g. to certain codes, certain time slots or combinations of several characteristics. A sub-band is always assigned to frequencies.

Terry does not teach sending a notification from the first radio station relating to the intended data transmission to the second radio station, the notification being sent only on one or more sub-bands selected from the group consisting of the one or more first sub-bands and the one or more second sub-bands. Terry discloses only sending a control message, such as, a clear-to-send (CTS) message during the contention period (CP), to facilitate sequencing of wireless transmission.

Terry is filed on Jan. 6, 2004, which is after the filing date of the above-identified application. Terry claims priority from the earlier filed provisional application 60/460,553, filed with the U.S. Patent Office on Apr. 4, 2003. Applicants respectfully request the Examiner to show support for the rejection (if repeated) in the provisional application which is prior art and not in the non-provisional application which is not prior art to the current application.

Franci teaches assignment of channel and sub-channel to an assigned frequency band but does not teach that radio station are assigned sub-bands. FIG. 3 of Franci merely illustrates an example of spectrum allocation in which a frequency band includes channels 31-33, each channel having sub-channels A-C. Paragraphs [0014]-[0017] of Franci describe a method for autonomous frequency management. However, Franci does not disclose or render obvious that radio stations are assigned to sub-bands.

In view of the above, independent claim 19 patentably distinguishes over the prior art by reciting:

- dividing a frequency band into a plurality of sub-bands for communicating between

the radio stations in the ad-hoc mode, wherein the first radio station is assigned one or more first sub-bands and the second radio station is assigned one or more second sub-bands; and

- sending a notification from the first radio station relating to the intended data transmission to the second radio station, the notification being sent only on one or more sub-bands selected from the group consisting of the one or more first sub-bands and the one or more second sub-bands.

Claims 20-24 are patentable by inheriting patentable features from claim 19 and by reciting additional patentably distinguishing features. For example, the combination of Terry and Franci does not render obvious the assignments of sub-bands nor the concrete algorithm, such as, the notification being sent on both the first and the second sub-bands when neither the first sub-band nor the second sub-band is occupied (see claim 23), and the notification being sent only on the second sub-band if the data transmission is intended only for the second radio station, the second sub-band is unoccupied and the first sub-band is occupied (claim 22).

In view of the above discussion, independent claim 25 and claims 26-28 depending from claim 25 patentably distinguish over the prior art at least due to the following features recited in claim 25:

- dividing a frequency band into a plurality of sub-bands for communication between the radio stations in the ad-hoc mode, wherein the first radio station is assigned one or more first sub-bands and the second radio station is assigned one or more second sub-bands; and
- after receiving the notification, sending an acknowledgement from the second radio station to the first radio station to acknowledge the intended data transmission, the acknowledgement being sent only on one or more sub-bands selected from the group consisting of one or more first sub-bands and one or more second sub-bands.

In view of the above discussion, independent claim 29 and claim 30 depending from claim 29 patentably distinguish over the prior art at least due to the following features recited in claim 29:

- dividing a frequency band into a plurality of sub-bands for communicating between the radio stations in the ad-hoc mode, wherein the first radio station is assigned one or more first sub-bands and the second radio station is assigned one or more second sub-bands;
- sending a notification from the first radio station relating to the intended data

transmission to the second radio station, the notification being sent only on one or more sub-bands selected from the group consisting of the one or more first sub-bands and the one or more second sub-bands; and

- after receiving the notification, sending an acknowledgement from the second radio station to the first radio station to acknowledge the intended data transmission, the acknowledgement being sent only on one or more sub-bands selected from the group consisting of one or more first sub-bands and one or more second sub-bands.

Regarding independent claims 33 and 35 and claims 34 and 36 depending from claims 33 and 35, respectively, the Office Action fails to put forth a *prima facie* case of obviousness.

In view of the above discussion, independent claim 37 patentably distinguishes over the prior art at least by reciting:

- selecting one or more sub-bands which will be used for sending, to a second radio station, a notification of an intended data transmission from the first radio station to the second radio station, said selection being made from one or more first sub-bands which have been assigned to the first radio station for communicating and/or from one or more second sub-bands which have been assigned to the second radio station for communicating, said sub-bands belonging to a frequency band which is divided into a plurality of sub-bands.

In view of the above discussion, independent claim 38 patentably distinguishes over the prior art at least by reciting:

- selecting one or more sub-bands which will be used for sending, to a first radio station, an acknowledgement of an intended data transmission from the first radio station to the second radio station, the acknowledgment being sent from the second radio station to the first radio station, said selection being made from one or more first sub-bands which have been assigned to the first radio station for communicating and/or from one or more second sub-bands which have been assigned to the second radio station for communicating, said sub-bands belonging to a frequency band which is divided into a plurality of sub-bands.

## CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

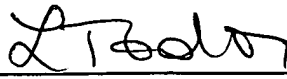
Serial No. 10/577,671

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: May 13, 2009

By:   
Luminita A. Todor  
Registration No. 57,639

1201 New York Avenue, N.W., 7th Floor  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501